DOCUMENT RESUME

ED 126 180 95 UD 016 146

AUTHOR	Gordon, Edmund W.; And Others
TITLE	Weikart Follow Through (Trinidad, Colorado).
INSTITUTION	Columbia Univ., New York, N.Y. ERIC Clearinghouse on the Urban Disadvantaged.
SPONS AGENCY	National Center for Educational Communication (DHEW/OE), Washington, D.C.
PUB DATE	72
GRANT	OEG-71-3946
NOTE	48p.; For full report, see ED 099 458; Part of the project entitled Preparation of Publications on Progress in Compensatory Education and Desegregation Programs
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	*Classroom Arrangement; *Classroom Techniques; Curriculum Development; Disadvantaged Youth; Economically Disadvantaged; *Elementary Education; Health Services; *Individualized Instruction; Instructional Staff; *Kindergarten; Nutrition; Paraprofessional School Personnel; Parent Participation; Program Descriptions; Staff Improvement
IDENTIFIERS	*Colorado (Trinidad); Elementary Secondary Education Act Title I; ESEA Title I; *Project Follow Through

ABSTRACT

The instructional part of Trinidad's Follow Through program is based on the High Scope model developed by the High/Scope Educational Research Foundation, a nonprofit organization headed by Dr. David Weikart. Now in its second year, the program emphasizes the development of individualized conceptual competence. Certain kindergarten through grade three classes in two of the elementary schools participate in the program. One teacher and two paraprofessional aides direct each classroom. Individualized instruction or small heterogeneous groups characterize the learning situation. The curriculum integrates academic areas and selected commercial materials with Jean Piaget's five cognitive areas. Since Follow Through aspires to improve the totality of the learning experience, the Trinidad program also emphasizes parent involvement, paraprofessional career development, nutrition, and health. The researchers considered the program exemplary for several reasons. Most important, it has improved the educational experience for the children. Furthermore, the program provides teachers and aides with the training and support necessary for them to adapt to the project and to pursue its objectives. (Author/JM)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED126180

WEIKART FOLLOW THROUGH

(Trinidad, Colorado)

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Information Retrieval Center on the Disadvantaged
Horace Mann-Lincoln Institute
Teachers College, Columbia University
New York, New York 10027
1972

UD016146

This document was produced as part of the project entitled Preparation of Publications on Progress in Compensatory Education and Desegregation Programs which was funded by the U.S. Office of Education, Dissemination Center for Educational Communication (OEG-71-3946). Points of view or opinions expressed in this material do not necessarily represent the official view or opinions of the U.S. Office of Education.

Edmund W. Gordon, Project Director
Carolyn Ralston Brownell, Project Coordinator
Jenne K. Brittell, Project Editor

Preface

In efforts at improving the quality of education and at justifying expenditures for compensatory education and school desegregation, we are increasingly dependent upon the data of evaluative research. Yet the data from many of these evaluation efforts conducted over the past twelve years are confused and inconclusive. The findings from these studies are sometimes contradictory. The interpretations have become the subject of considerable controversy, particularly as these findings and interpretations appear to contradict some of our cherished assumptions concerning education and educability. The lack of clarity with respect to the meaning of these data and the value of such programs is in part attributable to a variety of problems in the design and conduct of evaluative research. Among these problems, increasing attention is being called to the fact that there are sparse data concerning the specific nature of program interventions. These tend to be reported under labels or brief descriptions which provide little information relative to the nature and quality of the treatments to which the pupils studied are exposed. In an effort at gaining a better understanding of the content and nature of some of these programs, this project was directed at describing selected programs thought to be exemplary of quality, progress, trends or problems in compensatory education and school desegregation. Ten compensatory education programs and two school desegregation programs were selected for detailed description.

The principal procedures utilized in this study included documentary

analysis, direct observation of programs and interviews with selected informants. The tasks to be accomplished included identification and selection of projects to be studied, collection of all available data on each project considered, field study of promising candidate projects, preparation of descriptive reports, final selection and reporting.

Following is the description of one of these selected programs. For the complete report of this project see document number ED 099 458 in the ERIC system.

Follow Through is a federally-sponsored program designed to improve the total environment that envelops the child's learning experience. In Trinidad, Colorado, a program that exemplifies this philosophy is currently underway in several classes at the K-3 grade level.

Designed to

- improve the child's cognitive skills
- involve parents, particularly those of low-income families in the education of their children
- improve the career opportunities for the community
- improve the nutrition and health of the children and their families

Through

- highly individualized and small group instruction
- a non-traditional classroom organization and schedule
- a child-centered curriculum
- parent coordinators and aides to increase parental involvement
- nutritional and health assistance

Follow Through in Trinidad has attained

- enthusiastic, involved students
- highly successful, effective non-traditional teaching-learning environment
- committed, involved parents, regardless of economic situation

From the newspapers, radio, television, and books, educators and other pundits confront us with the truism that the schools, as perfect or imperfect as they may be, cannot singlehandedly educate American children. The time spent outside of school greatly enhances or diminishes the effectiveness of the school and the learning experience. A promising educational program, like a candle, cannot survive in a vacuum. The brands of poverty--malnutrition, ill health, and constant despair--will quash the joy of learning as surely as the lack of oxygen will snuff out the candle's glow. In recent years, educators, aided by the federal government, have tried a new tack in their efforts to increase the educational opportunities for the disadvantaged to improve the total environment within which a child learns. Like strategists, they wage a campaign on several fronts to attack all the evils that discourage and deter a child. In Trinidad, the children, the parents, and the community are experiencing the first victories.

SUMMARY

The instructional part of Trinidad's Follow Through program is based on the High/Scope model, developed by the High/Scope Educational Research Foundation, a non-profit organization headed by Dr. David Weikart. Now in its second year, the program emphasizes the development of individualized conceptual competence. Certain K-3 classes in two of the elementary schools participate in the program. One teacher and two paraprofessional aides direct each classroom. Individualized instruction or small heterogeneous groups characterize the learning situation. The curriculum integrates academic areas and selected commercial materials with Jean Piaget's five

cognitive areas: classification, seriation (numbers), spacial relations, temporal relations, and causality. Since Follow Through aspires to improve the totality of the learning experience, the Trinidad program also emphasizes parent involvement, paraprofessional career development, nutrition, and health. The researchers considered the program exemplary for several reasons. Most important, it has improved the educational experience for the children. The program's emphasis of individual involvement and self enables a child to develop at the pace and to the level of which he is capable. The children are enthusiastic, never bored, and delighted with their new found accomplishments. Furthermore, the program provides teachers and aides with the training and support necessary for them to adapt to the project and to pursue its objectives. In addition to a summer workshop for new teachers and aides, two curriculum assistants (who receive additional training at High/Scope center in Ypsilanti, Michigan and other Follow Through areas) are available to assist the teachers. High/Scope consultants are also available, and the organization has distributed a complete handbook to teachers. Aides assist the teachers as well. Finally, the program is exemplary because of the changes it has wrought in the child's environment outside the school. Through the parent coordinator, parent aide, and the Policy Advisory Council (PAC), the program has forged intense parent commitment and involvement. Many of the parents head low-income families; traditionally they have felt unable to comment or influence decisions concerning their children's education. The child's health and nutrition have also received attention. As a result of these external and

school based developments, parents and teachers are convinced that a partnership with those who influence the child's environment results in the most effective education.

WHERE

Ten thousand people live in Trinidad, Colorado. Like a backdrop, the Rockies rise behind the foothills of the Sangre de Cristo range. For years the mountains and their coal mines provided the residents with their main source of income. Today, however, only one of the more than twenty mines operate to remind one of the nineteenth century and early twentieth before cost, electricity, natural gas and oil rent their havoc on the coal industry.

While only one-fourth of the city's inhabitants receive social security, 60 percent fall under the poverty level set by the OEO guidelines. The unemployment rate exceeds the national average, and many citizens are supported by welfare. Three elementary schools, one junior high school, and one high school comprise the public school system. (There are also a K-8 and K-12 parochial school.) Although many of the residents have Spanish surnames, the great majority are long-time residents of the area, descendents of Spanish and Mexican immigrants. Trinidad has a large population descended from Italian and Slavic settlers as well.

As the area has almost no local taxable wealth, it qualifies for government funding. In addition to Follow Through, a Head Start program, a Title I remedial reading program and special summer program, state funds for special education, and a Career Opportunities Program (COP) are also administered by the School Board. In addition, Model Cities has provided

some funding for educational purposes, and there are several other projects focusing on vocational education for youngsters.

WHEN

In 1969, the school superintendent asked the Title I coordinator to form a Policy Advisory Committee of parents from the low income group in order to apply for Follow Through funds. The PAC hired a director, and she and the committee investigated various sponsors available to Follow Through projects. A sponsor is an organization that serves as a consultant for the instructional component and in some cases the parent participation component of local Follow Through projects. Parents, teachers, a principal and the director visited some on-going sites to examine sponsors' models in operation. Eventually they chose the Follow Through model of the High/Scope Educational Research Foundation. This model was chosen primarily for its emphasis on the child's self-discovery and for its divergence from the traditional classroom and curriculum. During the Spring 1970, the classrooms in which the Follow Through program would be implemented were agreed upon, aides were hired, materials and equipment were purchased. A week-long workshop was held that summer for the ten teachers, twenty classroom aides, curriculum assistant, parent coordinators and project director. At this workshop, High/Scope explained the Piagetian theory behind the cognitively oriented curriculum as well as the application of this theory through selected commercial materials. Since the teaching methods employed are quite different, this was the first of the inservice workshops, and in the Fall of 1970, the program began.

WHO
THE STUDENTS

The first ten Follow Through classrooms included all K-2 classes in one elementary school and one half of the K-2 classes in another. However, the low-income population is disbursed throughout the district; students at non-participating schools are eligible for Follow Through and parents can request a transfer to a Follow Through school.

In 1971-72, the project was expanded and involved four second grades and three classes at the kindergarten, first and third grade levels. Three hundred and eighteen children are in the current 13 classrooms, 233 from low-income families. The current Follow Through staff includes thirteen classroom teachers, twenty-six classroom aides, one parent coordinator and one parent aide, two curriculum assistants (High/Scope recommends one for each six classrooms), the project director and a secretary.

WHY

The school administrators felt that these children did not have the opportunity that education promises. Follow Through seeks to improve the educational opportunity for children by enriching their total environment. Since healthy bodies and full stomachs improve a child's ability to concentrate, they had to be attended to; since the kind of life a child has outside the classroom either bolsters or devastates his learning capacity and accomplishments, this too demanded attention. Parents must be involved in the educational process. Society has been cruel to the lower-income parent, too often assuming that, if he lacks the education, he also lacks

the inclination or determination to procure it for his children. Frequently this rather bureaucratic traditional view is bolstered by the lower-income parents' frustration, embarrassment, and bewilderment of the system. Unable to effect it in other areas, they doubt that education, even the education of their children, will be more susceptible to their demands and desires. In this program, the Policy Advisory Committee has succeeded in involving many parents in its activities. The Follow Through classrooms are open to parents and many come and help. The career opportunities for aides has enabled 12 aides to receive their Associate of Arts Degrees (A.A.) from the local college, and eight are now at work on B.A.'s. (The nutrition and health components have been integrated into the daily fabric of the families' lives.) Perhaps these children will, through the concerted efforts of everyone who cares, finally break the cycle, and educational promise will become reality.

WHAT

The diverse objectives reflect the variety of goals present in a project designed to improve the total learning environment. The major objectives cited by High/Scope are in the curriculum area. The project is to move toward the implementation or refinement of these key aspects:

1. That children
   - be provided the experience of learning by active participation and involvement
   - be able to physically explore materials
   - be able to test their own hypotheses
   - be provided the opportunity to find solutions in their ownway

-be assured the opportunity for self expression in spoken and written form

-be assured the opportunity of pupil learning over teacher teachin

-be provided an open classroom environment

2. That children will be provided the opportunity to develop concepts in a sequence that goes from the physical (motoric) to the verbal level.

3. That learning progresses from the concrete to the abstract - from the object level to the sign level.

4. That instructional staff work with individuals and small groups to assure the active participation of children.

5. That the classrooms be arranged to accommodate interest centers.

6. That effective use be made of equipment and materials required and recommended by the sponsor.

7. That the cognitive areas be fully integrated into the daily classroom routine and activities.

8. That instructional staff focus on the children's level of operation and provide learning experiences at that level.

9. That the instructional staff develop team approaches to planning and instruction.

10. That overall program coordination be provided to assure the implementation of the Cognitively-Oriented Curriculum.

11. That full utilization be made of program monitoring instruments and training techniques as provided by the sponsor.

12. That feedback and reporting be complete and comprehensive.

13. That effective use be made of instructional staff and of volunteers in implementing the Follow Through Program.

14. That Follow Through Center staff actively participate in the training services as provided by the sponsor.

At the beginning of the 1971-72 school year, several local objectives were set which reflect the other purposes of the project: parent involvement, nutritional improvement, health services and staff development.

A. Parent Involvement

1. To enroll all parents who are interested in GED and Adult Education courses offered through the Junior College beginning with the Fall Quarter and continuing through the year.
2. To set up committees where parent interest can be translated into action.
3. The PAC will try to set up the following activities:
   a. Help parents understand the curriculum
   b. Help educate the community about Follow Through
   c. Plan activities which will promote feeling of unity among Follow Through parents.
   d. Help parents become involved with community problems.

B. Nutritional

1. Hire an additional lunch aide at East Street School
2. Include money in budget to pay High School boys who help
3. Get more families enrolled in the County Extension nutrition program
4. Buy equipment required by Health Department

C. Health Services

1. Immunizations for each child for DPT, polio booster, measles revaccination, small pox
2. Eye tests, hearing tests.
3. Orthopedic clinics twice a year

4. Children with convulsive disorders referred to Health Department. Children come every two months for neurological examinations
5. Each low-income child will be rechecked with a dental examination. Aprophylactice flouride treatment and emergency care are also included.
6. More children will be given psychological testing next year. Necessary follow-up steps will be taken.

D. Staff Development

1. Third grade teachers coming into the program for the first time will be given orientation before the current year is over
2. Six more aides will be hired.

HOW

The program is both the sum of its parts and an entity created from the fusion of the individual components. As there are myriad objectives, so there are myriad routes to reach them. Thus the "How" of Trinidad's Follow Through involves a non-traditional classroom; a child-involved, child centered curriculum, including a planning-work evaluation activity; a novel schedule with which the learning occurs; an extensive, carefully articulated teachers' guide; concentrated efforts to stimulate parent interest and participation; and the provision of other services considered necessary to the child's well-being.

THE CLASSROOM

Three assumptions underlie the classroom organization, daily schedule, and teaching-learning process: children learn best when they are actively involved in exploration that has real objectives and places; when they understand the purpose of the learning activity; and when they are given some choic

how and what they will learn.

LEARNING STATIONS

In Follow Through classrooms, learning stations and interest centers have replaced the usual desks. Each learning station has 8-10 child-sized chairs and a table. The surrounding shelves sag under the weight of the abundantly stacked books, boxes and cans of learning aides. In many rooms the interest centers overlap with the tables and chairs of a learning area. Science, Math, Language Arts or Communication, Art, Writing, and Quiet interest areas are found in grades 1-3 classrooms. In the kindergartens, a housekeeping center and a block center may replace some of the others. At least one-third of each room is carpeted; the carpeted area includes the quiet and reading center. Classroom stores and water and grain tables are found in some rooms. Aquariums, plants, a telephone hook-up system (installed by a Follow Through parent), record players, and access to a Polaroid camera contribute to the aura of child-centeredness that pervades these classrooms.

INTEREST CENTERS

Interest centers serve the following purposes:

1. Provide setting for pupil planning
2. Encourage independent activity
3. Allow children to interact with children and with materials independently.
4. Provide a place for role-playing and for the representation of things not present.
5. Provide teachers with an opportunity to become cognizant of the needs of each individual child.

6. Stimulate communication through interaction, writing, reading and creative projects.

To successfully implement the use of these centers student-teacher planning is essential and the child should:

1. Be able to identify each center (name, place and function)
2. Know what appropriate materials and activities each center offers
3. Be actively involved in setting up centers and in making rules for the centers

In the ideal High/Scope classroom all bulletin boards and black boards would be accessible to children with no teacher-made bulletin boards in sight, and boxes of activity cards would be available in different parts of the room. Although these features are not yet seen in most Trinidad Follow Through classrooms, the teachers have made tremendous progress in establishing non-traditional classroom changes.

The curriculum assistants are beginning to encourage teachers to utilize activity cards. The cards stimulate the child's exploration or suggest an activity, thus further reinforcing the child's total involvement. Examples of these activity cards for various levels are:

1. Grade 1
   (Materials: magazines, catalogues, scissors, paste, paper)

   Card: Make a book of "B" word pictures.

2. Grade 2
   (Materials: A "miniature community" set-up in an interest center)

   Card: John and his brother left their home on bikes to go to school. They stopped for Ken at his home. How many yellow rods did they travel to school?

3. Grade 3

   Card: Find three ways to measure the brown table without using a yardstick, rule, or tape measure.

   Show or tell what you found.

HOW (Cont'd.)
CURRICULA

The commercially available materials which are compatible with the cognitively oriented curriculum are SCIS and AAAS science programs, Language Experience in Reading (LEIR) Taba Social Studies, and the Nuffield and Cuisenaire mathematics materials. The LEIR materials encourage the child to respond to what he hears or reads with a story of his own. These stories often form a child-written booklet. However, the Sullivan programmed reading materials are used to teach phonics, and basal readers are placed in interest centers and used on occasion supplementally.

Children are grouped heterogeneously each day by methods such as putting a different color dot on a child's wrist with a magic marker. Since the program emphasizes individual or small group learning, approximately eight children are in each group. Within the groups, there is opportunity for further individualization. Sometimes the children are allowed to choose their books from the class library, their materials from a specified group in the science center or to work with Cuisenaire rods. Language, Math and Art are a part of each day for all groups 1-3; students learn Social Studies and Science alternating days. Ideally, the three adults (two aides and a teacher) move between these academic areas, with one individual taking math some days, language arts on others, etc. In practice, this is often difficult when one adult feels far more comfortable handling one area than another.

PLANNING-WORK-EVALUATION

A planning-work-evaluating time is an important part of each day. It permits the child to construct his program, to execute it, and to evaluate it once done. "What are you going to do?" asks the teacher at the beginning of the period. "Go to the Quiet Center" or "to the Math Center" replies the child. She then asks a few more questions designed to lead him to greater specificity in his planning. After each child in the group has stated his plans, the next 40 or 50 minutes are spent in "work time" where each child acts on his planning. During this time children are free to team up to work with something, to ask an adult or another child for help, to work independently, or even to observe others for a bit. Teachers and aides are free to observe what materials each child selects, to facilitate the child's active learning process when necessary and to look at the development of a child in terms of the sequence of goals from Piagetian theory and research utilized in the cognitively oriented curriculum. During the "evaluation time" which follows this the children return to their groups and talk individually about what they did. The adult in the group follows up on their responses in various ways, most often utilizing divergent questioning. For example, when a kindergarten boy said that he had built a house of blocks, the teacher asked "how many blocks high was it?" At this point other children became involved in the problem and some blocks were brought into the group to "see how we can tell how many blocks high it is."

SCHEDULE

The schedule of approximate time spent in each activity by grade levels is as follows:

CENTER	TIME	ED*	K	1	2	3
HOUSEKEEPING	Approx. 20 minutes per center	"	XXX			
BLOCK		"	XXX			
MAKE BELIEVE		"	X		XX	
ART		"	XXX	X	XXXX	XXX
QUIET		"	XXX	X	XXX	X
INDEPENDENT		"	X	X		
BUILDING		"	X			
LISTENING		"	X	X	X	X
WATER-SAND TABLE		"	X			
POST OFFICE		"	X			
SCIENCE (AAAS) (SCIS 2, 3)				XX	XXXX	XXX
MATH		"	X	XXX	XXXX	XXX
COMMUNICATIONS		"		XXX	XXXX	XXX
SOCIAL STUDIES		"		XXX	XXXX	XXX
BOOKMAKING		"			X	
STORE		"			X	
WRITING		"		X	XX	XXX
SOCIAL REALITIES				X	X	
PHYSICAL REALTY					X	

* Every day

HOW (Cont'd.)
THE TEACHING-LEARNING PROCESS

High/Scope has distributed a large black loose leaf notebook to all teachers containing the High/Scope curriculum guide. It does not contain a structured program but rather offers descriptions of the relationship

(cognitive) areas, sequences in which children develop skills in these areas, behavioral goals for children to achieve within these sequences, rationales for the goals, and sample lesson plans and other resource materials. Teachers keep these notebooks in their rooms. Though they are somewhat too theoretical and lengthy to be read cover-to-cover, they can be referred to by teachers, curriculum assistants or consultants. Examples of the type of goals and rationales included follow:

[From the section "Teachers Guide to Classification," Grade Three]

Goal:	Rationale:
Child can combine subclasses into a supra-class hierarchial reclassification. e.g. dogs, cats, and cows are animals	As stated previously, it is important that the child understands the principle of clas inclusion: for example, we would want the child to develop to the stage of logical reasoning where he can mentally combine cows and horses and recognize that he nov a group of things called animals. When t child can perform such a task he has mast the logical operation of combining subclas to make a supraclass. Generally, childre cannot answer questions consisently like "If all of the animals in the world were to would there be any horses left?" or "Are there more dogs or more animals?" Usua the child does not attain this skill until aft the age of seven.

[From "Teachers Guide to Number," Preschool and Kindergarten]

Goal: Learning to order objects by their gross size (sequential activity breakdown follows)

a) free exploration of objects

b) making gross size comparisons between two objects, using polar concepts: big and little; large and small. Also could include tiny, teeny-weeny and enormous, giant, huge, jumbo, tremendous.

c) making gross size comparisons between two objects, using concepts in their comparative form: large and larger; small and smaller; big and bigger; little and littler. The teacher should use three objects in each of these cases, using one object as a standard. For example, after children agree that an object is big this object serves as a standard for when the other objects are compared. One object will be like the standar and be big, the other is bigger. If given only two objects to compare without a standard, children will most likely try to use the polar concepts of big and little.

d) making gross size comparisons between two objects that are the same size, using phrases: the same size as; big and as big as; little and as little as; large and as large as; small and as small as.

e) making gross size comparisons between two objects, using the concept and its negative forms: big and not big; little and not little; large and not large; small and not small.

f) ordering three objects by their gross size, using concepts in their comparative form: big, bigger, biggest; little, littler, littlest; large, larger, largest; small, smaller, smallest. Also could include the polar concepts and one comparative form, for example: big, little, littler.

g) ordering three objects by their gross size, using concepts: big, middle size, little; large, middle size, small.

h) ordering more than three objects by their gross size so that they match a series of identical objects which the teacher has ordered.

i) completing or continuing a series of more than three objects which have been ordered by their gross size.

j) ordering more than three objects by their gross size so that they correspond size-wise to a series of different objects which the teacher has ordered. For example, if the presented series is four dolls lined up from smallest to largest, the child would have to line up four canes from smallest to largest.

k) ordering more than three objects by their gross size so that they are in reverse order from an identical series of objects.

[From the section "Teacher's Guide to Spatial Relations," Grade 2]

Goal:	Position of self-angularism and development of perspective	Rationale: It is important for a child to be familiar with different points of view as he looks at objects. A young child does not always realize that it is the same object when he looks at it from a position different from the first position. Understanding that an object has not changed its size or shape but that it looks different because position of eye contact has changed. It is imperative for advanced object constancy and for the child's understanding of angularism.
1.	Recognizing familiar objects seen from different perspectives	

Goal:	Reconstruction of objects at the representational level in its proper perspective.	Rationale: It is important not only for a child to be able to recognize objects from different perspectives but also to be able to reconstruct th on a representative level. In order a child to perform this task he must able to determine relative positions.
1.	Drawing one object to scale	
2.	Drawing two objects in correct perspective	
3.	Drawing three objects in correct perspective	
Goal:	Self discovery of a measuring system	Rationale: This is actually the conc beginning of Euclidean concepts. In order for any measuring system to meaning the child should first disco a measuring system of his own (usin body parts or objects). From this c actually grow the need to have a for standard measuring system, (e.g. Billy's fingers are longer than Sara

[From "Teacher's Guide to Temporal Relations," Kindergarten]

Goal:	Comparing rates of movement	Learning begins with the child's mot activity. This is the base which ena the child to make conclusions about things in the environment. To the extent necessary, rates of movemen should be experienced by the child a he should be able to talk using speed terms about what he is doing, has d or will do. His next experiences sh then be with objects in the environm These experiences provide judgment which require that duration of time a speed be coordinated.
1.	child moves himself fast and slow, slower, faster, etc.	
2.	child moves and observes objects moving at different rates of speed	

[From "Teacher's Guide to Causality," Grade 1]

Goal:	Child will understand and observe change using various senses	Rationale: Cause and effect relation ships are involved whenever there a changes in material objects. An iro nail, for example, may change color and feel different when it rusts. The changes are caused when the nail is contact with water. The first step a child makes in understanding cause effect relationships occurs when he develops skill in observing and describing changes in the size, shape a color of physical objects. His atten is first focused on observing change using eyes, ears, nose. The attrib

of objects a child has learned to identify in previous lessons will provide the basis for describing changes.

HOW (Cont'd.)
THE PARENT COORDINATOR

The Follow Through philosophy emphasizes the improvement of the total environment. Thus the parent coordinator, parent aide, and PAC have critic roles. Not only do the parent coordinator and aide involve the children's families in the program; they also inform the classroom personnel of the children's outside environments. They frequently visit Follow Through homes just to see how the family is, answer any questions they may have, or assist if there is a problem. As a result of PAC activities, most parents are well informed, have visited the classrooms, and subsequently have questions for t coordinator. The parent coordinator also spends time in the classroom; thus they are better able to judge if a child needs medical care, clothes, or other supportive services. They then discuss the needs with the family and work jointly to eliminate them.

HEALTH AND NUTRITION

A parent coordinator frequently takes a child or a child and parents to a dentist or doctor. All first grade children are given a complete physical examination with immediate follow-up, if necessary, at a nominal fee (which Follow Through can help to defray); 185 children received dental care in 1970-71 at a reduced fee. Psychological testing and counseling are also available to Follow Through children and families. Low income Follow Through children receive free lunches, and at one school, free breakfast, while children at the other school get milk. Follow Through children also receive multiple vitamins daily.

The parent coordinator and aide are essential to the program's success. The mutual trust that has developed between Follow Through staff and Follow Through families results, in large part, from their efforts.

WHO (Cont'd.)
PERSONNEL

The vast majority of the staff has lived in the area for years. The director and the two curricula assistants have taught in the community. About two-thirds of the staff is Spanish surnamed, roughly approximating the population of the community. Aides, all of whom are from low-income homes, are recommended by the PAC personnel committee; subsequently, the COP advisory board to the PAC recommends them to the School Board. Although recommended aide appointments are usually confirmed, the School Board does not always appoint PAC-recommended teachers to the project. Theoretically teachers volunteered for the project; however only a few teachers really accepted the idea from the beginning, and several are in Follow Through classrooms because they feared loss of their teaching position. Nonetheless, many teachers who were skeptical in the beginning have discovered that they enjoy teaching with this curricula and that the greater involvement of all children is particularly satisfying to them. However, nearly all teachers still have some areas of the curriculum with which they are uncomfortable; this discomfort frequently stems from traditional beliefs of what "should be" done. For example, a first grade teacher may still think that "all children should be reading" when they leave her class, and it is difficult to convince her otherwise. These are the kinds of issues that the curriculum assistants or the general consultant often discuss with teachers. Although the teachers appear to like the materials emphasized there is some difficulty in using theTABA social studies materials and occasionally a reluctance to give up reliance on basal readers.

Since the classroom organization and the materials utilized require a teaching style vastly different from that of more traditional classrooms, the curriculum assistants and consultants from High/Scope are essential to the success of the project. The two curriculum assistants have had sufficient training in the theory underlying the cognitive curricula and sufficient practical experience in its use (arranged by High/Scope) to be of great assistance to the teachers and aides. The general consultant from High/Scope who spends several days each month in Trinidad shares these qualifications and assists the curriculum assistants as well as the teachers and aides.

A classroom teacher, thus, has several people she can turn to if she feels that things are not progressing as they should with her children. In some cases a curriculum assistant will use a particular set of materials with one group; in another, the two assistants might take over the entire class for several days; in another, help will be given in creating a new interest center; in another, the teacher needs reassurance that her children are not "playing too much" during work time. The curriculum assistants occasionally conduct workshops on one of the cognitive areas of classification, seriation, spatial relations, temporal relations, and causality and its integration with the academic areas and the commercial materials. Teachers and/or aides for the same grade level may meet with the curriculum assistants or with the general consultant to discuss common problems and issues. Further assistance is furnished by specialists in particular curricula who spend five days in Trinidad working with curriculum assistants, aides and teachers. The focus of these visits this year have been math, kindergarten communications, science and communications with a session on social studies scheduled.

Upon entering a classroom with three groups in session it is frequently difficult to tell which is the teacher and which the aides. The aides are usually included in conferences with the curriculum assistants and consultants, and the teacher and aides plan each day's activities together, usually in the hour after school with some final plans discussed in the morning. As in most projects with paraprofessional aides, the degree of involvement varies to some extent with the teacher and aides personality, but in all classrooms there is a significant involvement of aides in the learning process of the child.

In addition to the one week summer workshop, the workshops throughout the semester, and the classes they are required to attend at the local college, the aides attend a six week summer session in teacher aide techniques given to Trinidad paraprofessionals.

Four hours of college credit, gained in the summer session, and 36 hours of work experience have been accepted by the two nearby colleges toward a B.A. degree. The tuition for college classes is paid by COP. Course offerings are decided upon after consultation with the career development committee of COP.

The fact that all staff members have either taught or lived in Trinidad for a number of years helps create a climate of staff relationships where communication lines are, if not always wide open, at least clear, and where most dissatisfactions with the project are aired. The role of the principal here is an important one, and the support given by one principal in particular has aided the development of a cooperative enthusiastic staff and better classrooms. Staff communications with parents have become constant and frequent and initiated from both sides.

WHO (Cont'd.)
PARENTS

The PAC consists of two parents from each classroom, one of whom must be from a low-income family. The Committee also includes representatives from the Model Cities Program, Head Start, the Health Department Community Action Program, and the Mental Health agency. The functioning committees of PAC, each with its chairman, are social, program, personnel, publicity, evaluation, transportation, budget, and grievance; the committees hold meetings independently of the PAC meetings.

Parent attendance at PAC meetings, the home visits made by the parent coordinator and aide, the occasional "Coffees" held in parent homes, and the chatty monthly newsletter sent out by the Follow Through office have created an atmosphere of real parent involvement and readiness to act to improve their children's education.

The extent of the parents' commitment is illustrated by their actions in 1971 when Trinidad's Follow Through funding appeared threatened for reasons unrelated to the program's quality. The PAC sent a night letter to President Nixon, Colorado Representatives and Senators, and federal education officials stating, among other things, that "children are being taught to think for themselves and are being given the tools they will need..." In addition, parents wrote individual letters, and nine parents traveled over 200 miles to Denver to talk to officials.

Parents also volunteer approximately 500 hours each month, in the classroom, on field trips, attending meetings and open houses, taking children to the dentist, and/or assisting in the clinic. In the exemplary Follow Through classes, parents know that they are welcome to visit and help. This openness is one sign of the changes that the project has wrought

in Trinidad. The parents are enthusiastic about the program and extremely well informed about its emphasis on the development of conceptual competence.

With the advent of Follow Through and Head Start, Trinidad parents with low-incomes have come to realize that they too are entitled to a role in their children's education. This has been beneficial not only in terms of the children's education, but in terms of subtle changes in family attitudes toward themselves and their role in the community. Several parents have received their GED's with Follow Through paying for the classes; some are taking courses at the local colleges, and Follow Through pays tuition costs. Parent coordinator visits usually average more than 70 per month and are made to all parents; thus, even those who have not become actively involved are kept informed.

HOW (Cont'd.)
COST

Trinidad was spending approximately $480 per public school student, not including federally assisted projects. The Follow Through budget was $132,381 in 1970-71 and $192,459 in 1971-72. The additional cost per student in the Follow Through classrooms was approximately $600. The Follow Through budget included aide salaries but not aide tuition fees which were covered by the COP program. Teachers' salaries were not covered by the Follow Through budget.

The sources of the Follow Through funding in 1971-72 were:

Economic Opportunity Act	137,928
ESEA - Title I	13,350
Educational Achievement Act of Colorado	18,181
Model Cities	23,000

It appeared that the Trinidad Follow Through program would be refunded with no reduction in the lev el of operation. If it were to lose its funding it would be impossible for the area with its low tax base and very low expenditure per child to continue the program as it presently operates. The superintendent said that he would like to maintain at least one aide in each classroom and to keep the classroom arrangements. It would then, of course, be up to individual teachers to work with the cognitive curriculum.

WHAT

EVALUATION

Trinidad was not included in the Follow Through projects evaluated extensively by the Stanford Research Institute and the Trinidad system does not have sufficient funds to conduct extensive objective evaluations. The pre- and post-test comparisons available from 1970-71 show:

(1) of the 45 kindergarten children given Stanford Binet IQ tests at the beginning and end of the year, 28 showed gains of from 2 to 27 points, 11 being the average

(2) on the Metropolitan Reading Tests given to second grade, the median results were:

Pre-Test	Expected	Post-Test	Expected
1.9	2.2	3.0	2.85

With these limited results, one could tentatively conclude that this project which stresses each child reading at his own developmental pace may bring about the traditional desired results; i.e., grade level scores on reading tests more readily than many interventions aiming at the development of all children's skills simultaneously.

An evaluation of the attainment of the High/Scope and local objectives does not require testing but rather constant and sensitive observation, monitoring and communication between all individuals involved in the program -- aides, teachers, curriculum assistants, parents, parent aides, project director, local school and agency personnel, and High/Scope personnel. These communication channels are open and utilized constantly, enabling the High/Scope personnel to go beyond the presentation of a desirable model to colloborate work with the staff on its implementation. At the local level, the " community working together" atmosphere, fostered by parents and central staff, is critical to the attainment of many of the objectives; the objectives that require changes in outside agencies and personalities will, of course, take a longer time.

As was mentioned in the previous section, the prospects for continuation of funding were good. In terms of the implementation of the High/Scope model, this means that the Trinidad Follow Through Project could slowly develop truly cognitively oriented teachers and classrooms. Eventually, High/Scope could withdraw from direct involvement; the curriculum assistants could then train new teachers, and the entire local staff could cooperatively work within the cognitive framework.

EFFECTIVENESS

The Trinidad Follow Through program is based on the assumption that effective learning occurs in children when they are actively involved in the learning process; when they understand its purpose; and when they

are given some choice in how and what they will learn. The validity of this assumption is not at test, since it is supported by several years of research on the part of Weikart and others. What is questionable here are factors that relate to implementation.

The project has been implemented in two schools. In one, Follow Through operates in a majority of the classrooms; in the other, in a minority of them. In one school the principal is deeply committed; in the other, although he willingly lends his support, the principal is not highly involved. The two schools, both in the same district, differ vastly in quality. The favorable aspects of this critique refer only to the former school, i.e., the one with more participating classes, an involved principal, and active highly committed parents.

The concepts of the Weikart program have been applied with some success, in the East Street School. The degree to which the East Street School surpasses the other school indicates that situational factors must be considered in implementation of the program. At the East Street School, considerably more progress has been made in accommodating the building to the physical requirements of the program than accommodating the behavioral requirements. On visiting the school, one sees a large amount of teacher effort directed at supporting pupil exploration and pupil choice. However, old habits die slowly. Many of these teachers, in spite of their efforts at encouraging inquiry, often slip back into didactics and directed learning. The project has succeeded in developing and accumulating a variety of materials; which, in most classrooms, provide the child with an extensive range of choices. This is particularly true in the areas of science, social science and reading. The high level of staff morale reflects

their enthusiasm for the opportunity to participate in the program. This, in part, may be the result of the fact that the staff was exposed to several curricular patterns, but chose to work with the Weikart program.

Implementing such a program requires a high degree of supervision. In the East Street School, one can only be impressed with the knowledgeability, availability, and dedication of the principal. She effectively uses herself and others to provide day-to-day supervision, guidance, and support to the instructional staff. The principal's efforts are supplemented by those of the project's curriculum coordinators who are assigned to the two schools having the Follow Through project and by the assistance of a team of consultants who make periodic visits. This supervision seems to be quite good as it is provided by people who are not only knowledgeable, but who relate effectively with the teachers. They seem not, however, to have dealt adequately with the fact that tradition has left most of us in education more ready for answers to questions than for an inquiring approach to solutions. In observing the supervisory consultants in action, we sensed some teacher resentment directed at them. This occurred because they tended to offer possible alternative solutions rather than definitive answers to teaching problems. Some of these alternatives were inconsistent with earlier alternatives proposed, and this seemed thoroughly to confuse the teachers who preferred to be told directly what to do.

With regard to the communication participation, the project seems to have won the informed support of the parents. The parents know about the program, its purpose, and how it operates. Probably, a good deal of this can be attributed to the work of community liaisons who are indigenous to the neighborhood and make frequent visits to the homes of parents. Through

the visits, the parent coordinators keep them informed about project activities and listen to comments and complaints concerning the program.

The project, in addition, focuses attention on the economic and vocational status of adults in the community. Parents and paraprofessionals have been able to upgrade their skills through the project's support of their attendance at a local community college. Through the provision of nutritional and health care services, the project has satisfied the concern of parents that their children's physical and medical needs are properly attended to, even though they may not be financially able to do so themselves. This added dimension is illustrative of the project's total commitment to the development of children.

Weikart Follow Through

Trinidad, Colorado

I. Child-centered Curriculum: Rationale and Guidlines for Cognitive Development

Alma, M. Young Children's Thinking: Some Aspects of Piaget's Theory. New York: Teachers College Press, Columbia University, 1966.

Barth, Roland S,. "When Children Enjoy School." Childhood Education, January 1970.

Barth, R.S. and Rathbone, Charles, II.."The Open School: A Way of Thinking about Children, Learning and Knowledge." The Center Forum, Vol. 3 (July 1969).

Bereiter, C. and Englemann, S. Teaching Disadvantaged Children in the Preschool. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966.

Bloom, B.S. Stability and Change in Human Characteristics. New York: John Wiley and Sons, Inc., 1964.

Brown, Mary and Precious, Norman. The Integrated Day in the Primary School. New York: Agathon Press, Inc., 1970.

Bruner, J.S. Toward a Theory of Instruction. Cambridge, Mass.: Harvard University Press, 1966.

Cazden, C.B. "Some Implications of Research on Language Development for Preschool Education." Paper prepared for Social Science Research Council Conference on Preschool Education. University of Chicago, February 7-9, 1966.

Dawe, H.C. "A Study of the Effect of an Educational Program upon Language Development and Related Mental Functions in Young Children." Journal of Experimental Education, 11 (1942), 200-209.

Fowler, W. "Longitudinal Study of Early Stimulation in the Emergence of Cognitive Processes." Paper prepared for Social Science Research Council Conference on Preschool Education. University of Chicago, February 7-9, 1966.

Gardner, D. E. M. The Children's Play Center. New York: Agathon Press, 1970.

Goodenough, F. L. and Maurer, K. M. "The Relative Potency of the Nursery School and the Statistical Laboratory in Boosting the IQ." Journal of Educational Psychology, 1940-41, 541-549.

Gotkin, L. G. Language Lotto. New York: Appleton-Century-Croft, 1966.

Gray, S. and Klaus, R. A. "An Experimental Preschool Program for Culturally Deprived Children." Child Development, 1965, 887-898.

Inhelder, B. and Piaget, J. The Growth of Logical Thinking from Childhood to Adolescence. New York: Harper and Row, 1964.

Isaacs, Susan. Childhood and After. New York: Agathon Press, 1970.

Kamii, C. K. and Radin, N. L. "An Application of Piaget's Theory to a Framework for a Preschool Curriculum." Ypsilanti Public Schools, Ypsilanti, Michigan, 1966.

Peel, E. A. The Pupil's Thinking. London: Oldbourne, 1960.

Piaget, J. Play, Dreams and Imitation in Childhood. New York: Norton, 1962.

Piaget, J. The Construction of Reality in the Child. New York: Basic Books, 1954

Radin, N. and Weikart, D. P. "A Home Teaching Program for Disadvantaged Preschool Children." Ypsilanti Public Schools, Ypsilanti, Michigan, 1966.

Smilansky, S. "Progress Report on A Program to Demonstrate Ways of Using a Year of Kindergarten to Promote Cognitive Abilities." Henrietta Szold Institute, Israel, 1964.

Sonquist, H. D. and Kamii, C. K. "An Application of Piaget's Theory to Teaching in a Preschool for Disadvantaged Children." Ypsilanti Public Schools, Ypsilanti, Michigan, 1966.

Weikart, D.P., Kamii, C. K., and Radin, N. Perry Preschool Progress Report. Ypsilanti Public Schools, Ypsilanti, Michigan, 1964.

Weikart, D. P., and Lambie, D. Z. "Preschool Intervention through a Home Teaching Program." Disadvantaged Child. Edited by J. Hellmuth (Ed.). Seattle, Washington: Special Child Publications, Vol, II, 1967.

II. Parent Participation and Education

Adams, J. Durr, B.; and Mills, L. Preschool and Primary Education Program: Parent Education Program. Harrisburg, Pennsylvania, July 1968. (Typewritten.)

Bank, L. M. and Brooks, L. "Elementary Counselors Implement the Parent Principle." Elementary School and Guidance and Counseling, 5 (May 1971), 273-280.

Caldwell, B. "What Is the Optimal Learning Environment for the Young Child?" American Journal of Orthopsychiatry, 37 (1967), 8-21.

Cohen, L. "The Teacher's Role and Liaison Between School and Neighborhood." Linking Home and School. Edited by M. Craft et al. New York: Longmans, 1967.

Conant, M. M. "Teachers and Parents: Changing Roles and Goals." Childhood Education, 48 (December 1971), 114-118.

Cowen, N. "The Place of the Parent." Trends in Education, July 1966.

Department of Education and Science. Parent/Teacher Relations in Primary Schools: Education Survey 5 (HMSO 1968).

Division of Compensatory Education. "The Role of the School - Community Agent." Pittsburgh, Pennsylvania: Board of Public Education, 1967 (mimeographed).

Division of Compensatory Education. "The Preprimary Program." Pittsburgh, Pennsylvania Board of Public Education, 1967 (mimeographed.).

Fantini, M. "Alternatives for Urban School Reform." Harvard Educational Review, (1968), 1-19.

Froeberg, N. E. and Ryns, D. T. "Parental Influences on Cognitive Development In Early Childhood: A Review." Child Development, 38 (march 1967).

Frey, G. T. "Improving School - Community Relations: O'Farrell Junior High School, San Diego, California." Todays Education, January 1971, 14-17.

Fusco, G. C. "Reaching the Parents." The Inner-city Classroom: Teacher Behaviors. Edited by R. Strom. Columbus, Ohio: Charles E. Merrill, 1966, 145-152.

Gelwey, J. "A New Approach to PTA Organization", Comprehensive Education, (Spring 19

Gerber, Malcolm. " A Relationship Between Measures of the Home Environment and Intelligence Scores." Proceedings of the American Psychological Association (September 1970).

Gray, S., and Klaus, R. "An Experimental Preschool Program for Culturally Deprived Children." Child Development, 36 (1965), 887-898.

Greenwood, J. C. et al. "Some Promising Approaches to Parent Involvement: Florida Follow-through Program." TIP, 11 (June 1972), 183-189.

Grotberg, Edith H. "Early Childhood Education: Institutional Responsibilities for Early Childhood Education." National Society for the Study of Education Yearbook, 71 (1972), 317-338.

Handler, E. "Teacher - Parent Relations in Preschool." Urban Education, 6 (July 1971), 215-232.

Henderson, R. W. "Research and Consultation in a Natural Environment." Psychology in the School, 7 (October, 1970), 355-441.

Hornsky - Smith, M.P. "Parents and Primary Schools", New Society, January 1968.

Instructor. "Involving Parents in the Classroom," August, 1972, 54-58.

Karnes, M.; Studley, W.; and Wright, W. An Approach for Working with Parents of Disadvantaged Children: A Pilot Project. (Research Report, IRCD, U.S. Office of Education, Department of Health, Education, and Welfare, Grant OE - 1C-235.). Illinois: University of Illinois, 1966.

Levin, T. "Preschool Education and the Communities of the Poor." The Disadvantaged Learner: Knowing, Understanding, Educating. Edited by J. Hellmuth. San Francisco: Chandler, 1966, 398-406.

McPhail, C. "Getting the Parents Involved." Academic Therapy, 7 (Spring 1972), 271-275.

Milne, T. S. Student Syllabus for Preschool Child - Parent Participation Classes. San Diego, California: San Diego City Schools, 1964.

Milner, E. "A Study of the Relationships Between Reading Readiness in Grade One Children and Patterns of Parent - Child Interaction." Child Development, 22 (1951), 95-112.

Office of Economic Opportunity. Parent and Child Centers: A Guide for the Develop of Parent and Child Centers, Washington, D. C. : Office of Economic Opportunity, 1967.

Office of Economic Opportunity. Project Head Start Points for Parents. Washington, D Office of Economic Opportunity, 1967.

Orem, R. (Ed.). Montessori for the Disadvantaged. New York: G. P. Putnam's Sons, 19

Palmo, Artis J.; Kunnier, Joseph. "Modification of Behavior Therapy, Group Counseling and Consultation." Elementary School Guidance and Counseling, 6 (May 1972), 258-262.

Radin, N., and Weikart, D. "A Home Teaching Program for Disadvantaged Preschool Children." Journal of Special Education, 1 (1967), 183-190.

Rietz, D., and Riez, R. "Linking the School with the Home." Montessori for the Disadvantaged. Edited by R. Orem. New York: G. P. Putnam's Sons, 1967, 118-134.

Sharrock, A. N. "Aspects of Communication Between Schools and Parents; Great Britain." Educational Researcher, 12 (June 1970), 194-201.

Siegil, Dotty Lentz. "The Parent Visitor Educator as Home Visitor." Teaching the Child Through Parent Education: The Florida Approach. Edited by Ira J. Gordon. Gainesville, Florida: Institute for Development of Human Resources, University of Florida, February, 1969.

Sullivan, H. J., and Lebeaux, C. "Parents: Summer Reading Teachers! First Year Communication Skills Program of the Southwest Regional Laboratory." Elementary School Journal, 71 (February, 1971), 279-285.

West, E. "Home-School Relationships." Journal of Negro Education, 36 (1967), 349-352.

Wolman, T., and Levenson, D. "Parent-School Partnership in Pre-Kindergarten." Teachers College Record, 61 (1960), 421-431.

III. The Role, Need and Function of the Paraprofessional

Allen, Dwight W., and Morrison, Gary L. "Differentiated Staffing and the Nonprofessional: A Need for Educational Personnel Development." Journal of Research and Development in Education, 5 (Winter 1972), 51-56.

Anderson, Wilton. "Career Development: Lattice, Recruitment, Training, and Evaluation. Journal of Research and Development in Education, 5 (Winter 1972), 3-20.

_____. "Career Opportunity Program: Processes and Evaluation System." Journal of Research and Development in Education, 5 (Winter 1972), 31-50.

Bowman, Garda W. "Three Dimensional Team Training." Journal of Research and Development in Education, 5 (Winter 1972), 83-90.

_____. "Team Training in Systematic Observation of Early Childhood Education in the Career Opportunities Program." Journal of Research and Development in Education, 5 (Winter 1972), 106-148.

Caldwell, B. "What Is the Optimal Learning Environment for the Young Child?" American Journal of Orthopsychiatry, 37 (1967), 8-21.

Canady, Robert, and Leyfarth, John T. "Teacher - Administrator Expectations in Defining Roles for Paraprofessionals." Education, 92 (February - March 1972), 99-

Cowen, N. "The Place of the Parent." Trends in Education, (July 1966).

Craft, M. "Developments in Interprofessional Training." Journal of Higher Education, (September 1969).

Erb, J. "Use of Paraprofessionals." Educational Leadership, 29 (January 1972), 323-326.

Fraeberg, N.E., and Payne, D. T. "Parental Influences on Cognitive Development in Early Childhood: A Review." Child Development, 38 (March 1967).

Regional Education Association. Research Division. "Helping Teachers with Teacher Aides." National Education Association Research Bulletin, 50 (May 1972), 60-63.

Pope, L. "Blueprint for a Successful Paraprofessional Tutorial Program." Negro Education Rsearch, 2? (April 1971), 100-113.

Rauch, S.J. "Using Paraprofessionals as Reading Aids." International Reading Association Conference Papers (Reading Methods and Teacher Improvement), 15 (1971), 184-195.

Smith, N. C. "Utilization of Volunteer Aids in a Helping Relationship with Children." Journal of School Psychology, 8 (1970), 202-208.

Wolman, T., and Levenson, D. "Parent - School Partnership in Pre-Kindergarten." Teachers College Record, 69 (1968), 421-431.

Wolotsky, Hyman and others. "The Paraprofessional in the Role of Adult Learner." Journal of Research and Development in Education, 5 (Winter 1972), 101-105.

IV. Nutrition and Health Care

Abelson, Philip H. "Malnutrition, Learning and Behavior." Science, 17 (April 4, 1969), 164.

Baken, Rita. "Malnutition and Learning." (Center for Urban Affairs), UD 011 544, 1971.

Baker, Mary Jean. "Influence of Nutrition Education on Fourth and Fifth Graders." Journal of Nutrition Education, 4 (Spring, 1972), 55-57.

Bettleheim, Bruno.. Food to Nuture the Mind. Washington, D. C.: The Children's Foundation, 1970.

Birch, Herbert G. "Health and the Education of Socially Disadvantaged Children." Journal of Developmental Medicine and Child Neurology, 10 (1968), 580-599.

Birch, Herbert G., and Gussow, J. D. Disadvantaged Children: Health, Nutrition and School Failure. New York: Harcourt Brace and World, and Grune and Stratton, Inc., 1970.

Birch, Herbert G., and Grotberg, Edith H., (Eds.). Designs and Proposal for Early Childhood Research: A New Look: Malnutrition, Learning and Intelligence. Washington, D. C.: Office of Economic Opportunity, Office of Planning, Research, and Evaluation, 1971.

Carter, James et. al. Health and Nutrition in Disadvantaged Children and Their Relationship with Intellectual Development. (National Center for Educational Research and Development). Washington, D. C.: Division of Educational Laboratories.

Chase, H. P.; and Martin, H. P. "Undernutrition and Child Development." New England Journal of Medicine, (April 23, 1970), 933-939.

Cravioto, J.; Delicardie, E. R.; and Birch, H. G. Nutrition, Growth, and Neurointegrative Development: An Experimental and Ecologic Study." Supplement to Pediatrics, 38: 2, PartII (August 1966), 319-372.

Cravioto, J.; Espinoza, C. G.; and Birch, H. G."Early Malnutrition and Auditory-visual Integration in School Age Children." Journal of Special Education, 2 (1967), 75-82.

Dairy Council Digest. "Malnutrition in Early Life and Subsequent Mental Performance," 39, May-June, 1968, 13-16.

Egan, Mary C. "Nutrition Services in Child Health Programs." Journal of American Dietetic Association, 59 (December 1971), 555-559.

Filer, L. J., Jr."The United States Today: Is It Free of Public Health Nutrition Problems? - Anemia." American Journal of Public Health, 59 (1969), 327-338.

Frisch, Rose I. "Present Status of the Supposition that Malnutrition Causes Permanent Mental Retardation." American Journal of Clinical Nutrition, 23, (February 1970), 189-195.

Greenberg, Jerold S. "Emerging Educational Concepts and Health Instruction." Journal of School Health, 42 (June 1972), 356-357.

"Hunger, USA: A Report by the Citizens' Board of Inquiry into Hunger and Malnutrition in the United States." Washington, D. C.: New Community Press, 1968, 1-100.

Hurley, R. L. Poverty and Mental Retardation: A Causal Relationship. New York: Random House, 1969.

Myren, J. H. "Health Education Through Parent Participation, It's Happening Now." Elementary School Health, 41 (April 1971), 217-219.

Nader, Philip R.; and Others. "The School Health Service: A New Model." Pediatrics, 49 (June 1972), 805-813.

Nolte, A. E. "Health Values for Your Children." Instructor, 81 (August 1971), 47-55.

North, F. A. "Research Issues in Child Health I: An Overview." Pediatrics, 45 (April 1970).

North, F. A. "Project Headstart: Its Implications for School Health." American Journal of Public Health, 60 (April 1970) 698-703.

Nutrition and Intellectual Growth in Children, Bulletin 25-A, Washington, D. C.: Association for Childhood Education International, 1969.

Nutrition and Human Needs. Hearings before the Select Committee on Nutrition and Human Needs of the United States Senate. Parts 1, 2, 3, and 15, (1968-1969). Parts 1 and 2, 1970. Washington, D. C.: U. S. Government Printing Office.

Paige, J. C. "Health Programs for the Disadvantaged: Implications for School Health." Journal of School Health, 40 (March 1970), 123-126.

Pye, O. F. "Nutrition Educator in the Community." Perspectives in Education, Fall 1971 5-14.

Ricciuti, H. "Malnutrition, Learning and Intellectual Development: Research and Remediation." Psychology and Problems of Society, Washington, D. C.: American Psychological Association, 1970.

Scrimshaw, N. S., and Gordon, E. (Eds.). Malnutrition, Learning and Behavior. Cambridge, Massachusetts: MIT Press, 1968.

Selph, Annabelle D. "Focus on Optimal Development: Improving Child Nutrition." Journal of Nutrition Education, 4 (Spring, 1972), 68-69.

Their Daily Bread: A Study of the National School Lunch Program. New York: Committee on School Lunch Participation, 1968.

Willgoose, Carl E. "Dental Health: It's a Live Subject." Instructor, February 1972, 58-5

V. Individualized Instruction

Allen, D. W. "How You Can Individualize Instruction Right Now." Nation's Schools, April, 1966.

ASCD Year Book."Indiviualizing Instruction,"National Education Association, 1964.

Audio-visual Instruction. "Self Instruction and Information Retrieval Systems; Symposium," 4 (Spring 1970), 6-39.

Auxter, D. "Teacher of Individually Prescribed Instruction in Perceptual Motor Development." JOHPER, 42 (June 1971), 41-42.

Bartel, E. V. "Initiating a Self-directed Learning Program in the Classroom." Education, 91 (February 1971), 247-249.

Bishop, Lloyd K. Individualizing Educational Systems. New York: Harper and Row, 1971.

Bloom, Benjamin S. (Ed.). Taxonomy of Educational Objectives: Handbook I: Cognitive Domain. New York: McKay, 1956.

Burns, R. "Methods for Individualizing Instruction." Educational Technology, 11 (June 1971), 55-56.

Childhood Education. "Designing Tomorrow's Schools Today: The Multi-Sensory Experience Center," February 1971.

A Climate for Individuality. Statement of the Joint Project on the Individual and the School. Washington, D. C.: American Association of School Administrato 1965.

Clymer, T., and Kearney, N. C. "Curricular Instructional Provisions for Individual Differences." Individualizing Instruction. Edited by N. B. Henry. Sixty-first Yearbook (Part I) of the National Society for the Study of Education. Chicago: University of Chicago, 1966.

Combs, Arthur, and Snygg, Donald. Individual Behavior. New York: Harper and Row, 19

Cutts, Norma and Mosely, Nicholas. Providing for Individual Differences in the Elementary School. New Jersey: Prentice-Hall, 1960.

Dell, R.(Ed.).Individualizing Instruction. Washington, D. C.: Association for Supervision and Curriculum Development, 1964.

Drumheller, S. J. "Transitional Support System for the 1970's: Developing Individualized Instructional Programs." Educational Technology, 11 (October 197 34.

Dunn, R. S. and Dunn, K. "Practical Questions Teachers Ask About Individualizing Instruction, and Some of the Answers." Audio-visual Instructor, 17 (January 1972), 47-50.

Eisele, J. C. "Individualized Instruction." Contemporary Education, 43 (October 1971), 16-20.

Eiss, A. F. "Individualized Learning." Science and Children, 9 (April 1972), 9-11.

Emrick, J. A. "Evaluation Model for Mastery Testing." Journal of Educational Methods, 8 (Winter 1971), 3210326.

Flammer, Gordon H. "Learning as the Constant and Time as the Variable." Journal of Engineering Education, 61 (March 1971), 523-527.

Gibbons, Maurice. "Systematic Development in Schooling." The Journal of Education, 16 (April 1970), 32-43.

Gleason, Gerald T. (Ed.). The Theory and Nature of Independent Learning. Scranton: International Textbook, 1967.

Grossman, Rose. "Individualizing Occurs When Thinking Becomes Visible." Education Technology, 12 (March 72), 36-39.

Henry, Nelson B. (Ed.). The Dynamics of Instructional Groups. Fifty-ninth Yearbook (Part 2) of the National Society for the Study of Education. Chicago: University of Chicago Press, 1960.

_____. (Ed.). Individualizing Instruction. Eighty-first Yearbook (Part I) of the National Society for the Study of Education. Chicago: University Press, 1962.

Hensley, C. "Individualized Instruction: Purposes and Organization." School and Community, 58 (October 1971), 32-33.

Howes, Virgil M. Individualizing of Instruction. New York: Macmillan, 1970.

Jablonsky, Adelaide. "A Selected Eric Bibliography on Individualizing Instruction. New York: Eric Information Retrieval Center on the Disadvantaged, Teachers College, Columbia University, January 1969.

Jasik, Marilyn. "Breaking Barriers by Individualizing." Childhood Education, October 1968.

Kapfer, Philip C. "An Instructional Management Strategy for Individualized Learning." Phi Delta Kappan, 49 (January 1968), 260-263.

Kapfer, P. G.,and Kapfer, M. B. (Eds.). "Learning Packages: Symposium." Educational Technology, 12 (Summer 1972), 9-33.

Kingstedt, J. L. "Developing Instructional Modules for Individualized Learning." Education Technology, 11 (October 1971), 73-74.

Klausmeier, H. J. "Multi-unit Elementary School and Individually Guided Education." Phi Delta Kappan, 53 (November 1971), 181-184.

Klausmeier, H. J. and Others. "Instructional Programming for the Individual Pupil in the Multiunit Elementary School." Elementary School Journal, 72 (November 1971), 80-101.

Lambek, M., and Lorentzen, M. "Learning Resource Centers in Every Classroom." Instructor, October 1971, 81-83.

National Society for the Study of Education. Individualizing Instruction. Chicago: University of Chicago Press, 1961.

New Approaches to Individualizing Instruction. Princeton: Educational Testing Service, 1965.

Newhouse, Robert A. "Classroom Learning Stations----A Strategy for Personalized Instruction." Research Bulletin, 17 (Winter 1972), 38-39.

Noar, Gertrude. Individualized Instruction: Every Child a Winner. New York: Holt, Rinehart and Winston, 1971.

Packard, R. G. "Models of Individualized Instruction: The Search for a Measure." Educational Technology, 12 (August 1972), 11-14.

Palmer, C., and Kent, S. "Helping Parents Understand the Flexible Classroom." Indiana School Bulletin, 31 (October 1971), 35-37.

Peter, Lawrence. Prescriptive Teaching. New York: McGraw-Hill, 1965.

Root, Gus. "Designing Institution Achievement Motivation." Journal of Engineering Education, 61 (March 1971), 523-527.

Roth, T. C. "Expanding the Concept of Individualized Education." Education Forum, November 1971, 61-66.

Snapp, M. and Others. "Study of Individualizing Instruction by Using Elementary School Children as Tutors." Journal School Psychology, 10 (March 1972), 4-5+.

Stodghill, R. "Toward New Goals for Individualization: Symposium." Educational Leadership, January 1972, 295-296+.

Tanner, Laurel N., and Lindgren, H. C. Classroom Teaching and Learning. New York: Harper and Row, 1971.

Thomas, C., and Crescimbeni, J. Individualizing Instruction in the Elementary School. New York: Random House, 1967.

Thomas, R. M., and Thomas, Shirley M. Individual Differences in the Classroom. New York: McKay, 1965.

Torrance, Paul E. "Independent Study as an Instructional Tool." Theory into Practice, December 1966.

Veatch, Jeanette. "Improving Independent Study." Childhood Education, January 1967.

Wheeler, P. H. "Creating a Climate for Individualizing Instruction." Young Children, 27 (October 1971), 12-15.

Winn, Mildred. "Independent Study at Seven." Childhood Education, 1970.

Wolfson, B. J. "Pupils' and Teachers' Roles in Individualized Instruction." Elementary School Journal, April 1968.

Subject Areas

Social Studies

Campbell, R. H. "Individualization Through Inquiry: Social Studies as the Vehicle." Gifted Child Quarterly, Autumn 1971, 225-228.

Kenworthy, Leonard S. Social Studies for the Seventies. New York: Ginn, 1970.

Jarolimek, John and Davis, B. Social Studies: Focus on Active Learning. New York: Macmillan, 1970.

Taba, Hilda; Durkin, M.; and Fraenkel, J. R. Teachers Handbook for Elementary Social Studies, 2nd edition, Massachusetts: Addison-Wesley, 1971.

Science

Klopfer, L. E. "Individualized Science: Relevance for the 1970's." Science Education, October 1971, 441-448.

Renner, J. W.; and Ragan, W. B. Teaching Science in the Elementary School. New York: Harper and Row, 1968.

Schmidt, V. E.; and Rockastle, N. Teaching Science with Everyday Things. New York: McGraw-Hill, 1968.

Victor, Edward. Science for the Elementary School. New York: Macmillan, 1970.

Reading

Chall, Jeanne. Learning to Read: The Great Debate. New York: McGraw-Hill, 1967.

Cohen, S. Alan. Teach Them All to Read. New York: Random House, 1970.

Reading

Morris, Albert J. How to Increase Reading Ability. 5th edition. New York: Davis McKay, 1970.

Lee, Doris M. Learning to Read Through Experience. 2nd edition. New York: R. Vallen, 1969.

Schoellor, A. W. "Setting Up Reading Stations." Instructor, April 1972, 57-59.

Trimble, Nan. "Reading Tailored To Fit." Reading, 5 (June 1971), 10-14.

Mathematics

Clark, H. C. "Before You Individualize Your Elementary Math." School Science and Mathematics, 71 (November 1971), 675-680.

Davis, R. B. "Individualizing Mathematics Instruction: Symposium." Educational Technology, 12 (March 1972), 5-59.

Trueblood, C. R. "Model For Using Diagnosis in Individualizing Mathematics Instruction in the Elementary School Classroom." Arithmetic Teacher, November 1971, 505-511.

VI. Public Documents

New York Times."Follow Through Program Manual," February 24, 1969.

New York Times. June 23, 1970.

The Chronicle News. "Follow Through Classroom Is a Different World," February 23, 1971.

Trinidad Public School District #1. What's New With Follow Through. Trinidad, Colorado, Issues 1, 16, 21, 22, 23, October 1972.